

## UPDATED CHECKLIST OF THE FREE-LIVING MARINE COPEPODA (CRUSTACEA) OF MEXICO

EDUARDO SUÁREZ-MORALES\*  
REBECA GASCA\*

### RESUMEN

La fauna de copépodos de los mares mexicanos ha sido estudiada desde hace décadas. Sin embargo, el número de especies presentes en México no se ha establecido y sólo existen listas faunísticas restringidas a ciertas zonas. En este trabajo se presenta una lista de las especies de copépodos marinos registradas en las aguas mexicanas del Pacífico y del Atlántico. El número total de especies (479) representa principalmente la riqueza específica de los ambientes de la columna de agua, con los Calanoida como el grupo más diverso. El conocimiento de los Harpacticoida, un grupo muy diverso en el meiobentos, es aún escaso en México, por lo que debe ser incrementado. Se presenta también la literatura taxonómica y de distribución de copépodos marinos para México.

Palabras clave: copépodos, México, lista de especies.

### ABSTRACT

The marine copepod fauna of the Mexican seas has been studied for decades. However, the number of species occurring in these waters has not been estimated, the only faunistic checklists being from restricted areas. In this paper, we present an updated and revised checklist of the marine copepods recorded in Mexican territorial waters of the Pacific and the Atlantic. The total number of species (479) represent mainly collections from the water column environments, with the pelagic group Calanoida being the most diverse. Knowledge of the very diverse meiobenthic copepods belonging to the Harpacticoida is still limited in Mexico, and should be improved. A list of references on the taxonomy and distribution of Mexican marine copepods is also presented here.

Key words: copepods, Mexico, checklist.

\* El Colegio de la Frontera Sur (ECOSUR) Unidad Chetumal. Apartado Postal 424, Chetumal, Quintana Roo 77000. México

## INTRODUCTION

The free-living marine copepods of the Mexican seas have been surveyed for decades (Campos & Suárez, 1994; Suárez, 1996); however, only a few of these studies have covered a wide area, either in the Pacific or the Atlantic waters of Mexico. Therefore, previous faunistic checklists of the Mexican copepod fauna refer to restricted areas, such as the Gulf of California (Brinton *et al.*, 1986), the Caribbean Sea (Reid, 1990) or the southern Gulf of Mexico (Suárez, 1992a). There are no current estimations of the diversity of this group in Mexico. In this work, an updated and revised checklist of the marine copepods recorded from Mexico is here presented along with the most relevant literature for the Mexican fauna. The list includes copepods from oceanic, coastal, and estuarine environments. The Mexican seas have been divided into four large areas: Gulf of Mexico and Caribbean Sea in the Atlantic, and Mexican Pacific and Gulf of California, in the Pacific.

Preference was given to the literature with species lists and taxonomic aspects of different taxa. General, comprehensive works or revisions of selected taxa (Nishida, 1985; Walter, 1989; Markhaseva, 1996; Razouls, 1996) were also consulted.

The analysis of published and unpublished (thesis, project reports) information on the free-living marine copepods from Mexican waters of the Atlantic and the Pacific oceans yields a total of 478 species belonging to 5 orders, 54 families, and 135 genera. Out of the total number of species, 325 (ca. 68 %) belong to the order Calanoida, 62 (12.9 %) to the Poecilostomatoidea, 20 (4.2 %) to the Cyclopoida, 36 (7.3 %) to the Harpacticoida, 24 (5 %) to the Siphonostomatoidea, and the remaining 12 (2.7 %) to the Monstrilloidea, a group in which only the adult stage is free-living.

Down to the family and genus level, the order Calanoida is clearly the most diverse group, with 26 families and 78 genera present in Mexican waters, followed by Harpacticoida (17 and 30) and Poecilostomatoidea (6 and 12). Within the calanoids, the family Aetideidae is the most speciose, with 43 species. The families Euchaetidae (37 species), Pontellidae (41), and Scolecithricidae (30) are also well represented in Mexico. Within the Poecilostomatoidea, the two most species-rich families in Mexico are Corycaeidae (with 27 species) and Sapphirinidae (with 17).

Most of the species included in this checklist (89%) are records from water column environments (epi- and mesopelagic); a relatively low number of epibenthic or benthic forms is also included (58 species). However, according to Marcotte (1986), meiobenthic harpacticoids are quite diverse, even more than calanoids. Surveys in the benthic environments of the Mexican Seas are expected to yield a significant number of new records of harpacticoid copepods. For instance, Reid (1990) listed 211 harpacticoid copepod species from the Caribbean and Central America, and only a few of these have been recorded in Mexico. The checklist is also expected to grow steadily as deeper plankton samplings are carried out, as the knowledge on the copepod fauna below 300-400 m in the Mexican seas is still quite limited.

Regarding the different areas analysed, 269 copepod species have been recorded in the Gulf of Mexico, 201 in the Mexican Caribbean, 154 in the Gulf of California and 236 in the Mexican Tropical Pacific area. Of the total number of species, 82 have been recorded only in the Gulf of Mexico, 31 in the Mexican Caribbean area, 30 in the Gulf of California, and 93 in the Tropical Pacific; the reason for this figure in the tropical Pacific is the addition of the rich copepod fauna associated to hydrothermal vents.

Reid (1990) listed a total of 430 species of free-living marine copepods for Central America, Mexico and the entire Caribbean Sea. However, only 167 of these were recorded in Mexico at that time. Hernández-Trujillo (1996) estimated as 150 the number of species dwelling in the Gulf of Mexico and Caribbean Sea, and as 293 the number of species reported from the Pacific area, with 89 species common to both areas. The total number of marine copepod species estimated by Hernández-Trujillo for Mexico (354) is ca. 26 % lower than the figure presented in this report. Most differences may result in our inclusion of recent works on harpacticoids, monstrilloids, and on deep-water copepods.

### List of the marine free-living and semiparasitic copepods collected in Mexican waters, using Huys & Boxshall's (1991) taxonomic scheme

I: Gulf of Mexico; II: Caribbean Sea; III. Tropical Pacific and Californian coast; IV: Gulf of California.

**Subclass Copepoda** Milne-Edwards, 1840

*A. armatus* Boeck, 1872. I, III, IV

**Infraclass Neocopepoda** Huys & Boxshall,

*A. bradyi* A. Scott, 1909. III, IV

1991

*A. giesbrechti* (Cleve, 1904). I, II, III

**Superorder Gymnoplea** Giesbrecht, 1882

*A. mexicanus* Park, 1974. I

**Order Calanoida** G.O. Sars, 1903

*A. truncatus* Bradford, 1971. III, IV

**Family Acartiidae** Sars, 1900

*Bradyidius arnoldi* Fleminger, 1957. I

*Acartia bacorehuisensis* Zamora-Sánchez

*Chiridiella bispinosa* Park, 1970. I

& Gómez-Aguirre, 1985. IV

*Ch. chainae* Grice, 1969. II

*A. californiensis* Trinast, 1976. III

*Ch. macrodactyla* Sars, 1907. II

*A. clausi* Giesbrecht, 1892. III

*Chiridius gracilis* Farran, 1908. I

*A. danae* Giesbrecht, 1889 I, II, III, IV

*Ch. mexicanus* Park, 1975. I

*A. lilljeborgii* Giesbrecht, 1889. I, II, III, IV

*Ch. molestus* Tanaka, 1957. I

*A. longiremis* (Lilljeborg, 1853). IV

*Ch. poppei* Giesbrecht, 1892. I

*A. negligens* Dana, 1852. II, III, IV

*Chirundina streetsii* Giesbrecht, 1895 I, III

*A. spinata* Esterly, 1911. I, II

*Euchirella amoena* Giesbrecht, 1888. I, II, III

*A. tonsa* Dana, 1849. I, II, III, IV

*E. bella* Giesbrecht, 1888. III

**Family Aetideidae** Giesbrecht, 1892

*E. bitumida* With, 1915. I

*Aetideopsis multiserrata* (Wolfenden, 1904) III,

*E. curticauda* Giesbrecht, 1888. I, II, III

IV

*E. maxima* Wolfenden, 1905. I

*Aetideus acutus* Farran, 1929. I, II, III, IV

*E. messinensis* (Claus, 1863). I, II

*E. pseudotruncata* Park, 1975. I

*E. pulchra* Lubbock, 1856. I, II

*E. rostrata* (Claus, 1866). I  
*E. splendens* Vervoort, 1963. I  
*E. truncata* Esterly, 1911. I  
*E. venusta* Giesbrecht, 1888. I, II, III, IV  
*Gaetanus armiger* Giesbrecht, 1888. III  
*G. brachyurus* Sars, 1907. I  
*G. brevicornis* Esterly, 1906. III  
*G. kruppii* Giesbrecht, 1888. I  
*G. latifrons* Sars, 1925. I, II  
*G. miles* Giesbrecht, 1888. I, II, III  
*G. minor* Farran, 1905. I, II  
*G. minutus* Sars, 1907. I, II  
*G. pileatus* Farran, 1903. I, II  
*G. pungens* (Giesbrecht, 1895). III  
*G. robustus* (Sars, 1905). III  
*G. tenuispinus* (Sars, 1900). I, II  
*Undeuchaeta intermedia* Scott, 1909. III  
*U. major* Giesbrecht, 1888. I, II  
*U. plumosa* (Lubbock, 1856). I, II

**Family Arietellidae** Sars, 1903  
*Arietellus armatus* Wolfenden, 1911. I, II  
*A. giesbrechti* Sars, 1905. I, II  
*A. pacificus* Esterly, 1913. III  
*A. plumifer* Sars, 1905. I, II  
*A. setosus* Giesbrecht, 1892. II, III  
*Paraugaptitus buchanani* Wolfenden, 1904. I, III  
*Phyllopus bidentatus* Brady, 1883. I, II, IV

**Family Augaptilidae** Sars, 1905  
*Augaptitus californicus* Esterly, 1913. III  
*A. depressus* Esterly, 1913. III  
*A. megalurus* Giesbrecht, 1889. I  
*A. romanus* Esterly, 1913. III  
*A. longicaudatus* (Claus, 1863). I, II, IV  
*Euaugaptitus filigerus* (Claus, 1863). I, II  
*E. gracilis* (Sars, 1905). I  
*E. hecticus* (Giesbrecht, 1889). I, II  
*E. laticeps* (Sars, 1905). I  
*E. nodifrons* (Sars, 1905). I  
*Centraugaptitus rattrayi* (Scott, 1894). I  
*Haloptilus acutifrons* (Giesbrecht, 1892). I, II, III, IV  
*H. chierchiae* (Giesbrecht, 1889). IV  
*H. fertilis* (Giesbrecht, 1892). I, II, III  
*H. furcatus* Sars, 1920. I

*H. longicornis* (Claus, 1863). I, II, III, IV  
*H. mucronatus* (Claus, 1863). I, II  
*H. ornatus* (Giesbrecht, 1892). I, II, III, IV  
*H. oxycephalus* (Giesbrecht, 1889). I, II, III  
*H. spiniceps* (Giesbrecht, 1892). I, II  
*Heteropilus attenuatus* (Sars, 1905). II  
*Pachyptilus eurygnathus* Sars, 1920. I

**Family Calanidae** Dana, 1849  
*Calanus minor* (Claus, 1863). I, II, III, IV  
*C. pacificus* Brodsky, 1948. III, IV  
*Canthocalanus pauper* Giesbrecht, 1888. III  
*Cosmocalanus darwini* (Lubbock, 1860). I, III, IV  
*Mesocalanus tenuicornis* (Dana, 1849). I, II, III, IV  
*M. lighti* (Bowman, 1955). III  
*Neocalanus gracilis* (Dana, 1849). I, II, III, IV  
*N. cristatus* (Mori, 1937). III  
*N. robustior* (Giesbrecht, 1888). I, II, III, IV  
*Undinula vulgaris* (Dana, 1852). I, II, III, IV

**Family Calocalanidae** Bernard, 1958  
*Calocalanus contractus* Farran, 1926. I, II, III, IV  
*C. gracilis* Tanaka, 1956. I  
*C. pavo* (Dana, 1852). I, II, III, IV  
*C. pavoninus* Farran, 1936. I, IV  
*C. plumulosus* (Claus, 1863). I, II, III, IV  
*C. styliremis* Giesbrecht, 1888. I, II, III, IV  
*Mecynocera clausi* Thompson, 1888. I, II, III

**Family Candaciidae** Giesbrecht, 1892  
*Candacia aethiopica* Dana, 1849. I, III, IV  
*C. bipinnata* (Giesbrecht, 1889). I, III, IV  
*C. bradyi* Scott, 1902. III  
*C. catula* (Giesbrecht, 1889). III, IV  
*C. columbae* Campbell, 1929. III  
*C. curta* (Dana, 1849). I, III, IV  
*C. discaudata* Scott, 1909. III  
*C. longimana* (Claus, 1863). I, II  
*C. pachydactyla* (Dana, 1852). I, II, III, IV  
*C. paenelongimana* Fleminger & Bowman, 1956. I

*C. pectinata* Giesbrecht, 1892. III  
*C. posii* Grice & Jones, 1960. III, IV  
*C. truncata* (Dana, 1849). III, IV  
*C. varicans* (Giesbrecht, 1892). I, II, III, IV  
*Paracandacia bispinosa* (Claus, 1863). I, II  
*P. simplex* (Giesbrecht, 1889). I, II

**Family Centropagidae** Giesbrecht, 1892

*Centropages abdominalis* Sato, 1913. III  
*C. bradyi* Wheeler, 1901. III  
*C. calaninus* (Dana, 1849). III  
*C. caribbeanensis* Park, 1970. I, II  
*C. elongatus* Giesbrecht, 1896. III  
*C. furcatus* (Dana, 1849). III, IV  
*C. gracilis* (Dana, 1849). III, IV  
*C. hamatus* (Lilljeborg, 1853). I, II  
*C. longicornis* Dana, 1849. III, IV  
*C. typicus* Krøyer, 1849. I  
*C. velificatus* (Oliveira, 1947) I, II  
*C. violaceus* (Claus, 1863). I, II

**Family Clausocalanidae** Giesbrecht, 1892

*Clausocalanus arcuicornis* (Dana, 1849). I, II, III  
*C. farrani* Sewell, 1929. III, IV  
*C. furcatus* (Brady, 1883). I, II, III, IV  
*C. jobei* Frost & Fleminger, 1968. III, IV  
*C. mastigophorus* (Claus, 1866). IV  
*C. parapergens* Frost & Fleminger, 1968. IV  
*C. paululus* Farran, 1926. I  
*Ctenocalanus longicornis* Mori, 1937. III  
*C. vanus* Giesbrecht, 1888. I, III, IV

**Family Eucalanidae** Giesbrecht, 1892

*Eucalanus californicus* Johnson, 1938. III  
*E. elongatus* (Dana, 1849). I, II, III, IV  
*E. hyalinus* (Claus, 1866). III  
*Pareucalanus sewelli* (Fleminger, 1973). I, II, III, IV  
*Rhincalanus cornutus* (Dana, 1849). I, II, III, IV  
*R. nasutus* Giesbrecht, 1888. I, II, III, IV  
*Subeucalanus crassus* (Giesbrecht, 1888). I, II, III  
*S. inermis* (Giesbrecht, 1892). III, IV  
*S. monachus* (Giesbrecht, 1888). I, II  
*S. mucronatus* (Giesbrecht, 1888). I, II

*S. pileatus* (Giesbrecht, 1888). I, II, III  
*S. subcrassus* (Giesbrecht, 1888). I, II, III, IV  
*S. subtenuis* (Giesbrecht, 1888). I, II, III, IV

**Family Euchaetidae** Giesbrecht, 1892

*Euchaeta acuta* Giesbrecht, 1892. I, II, III, IV  
*E. indica* Wolfenden, 1905. IV  
*E. longicornis* (Giesbrecht, 1888). III, IV  
*E. marina* (Prestandrea, 1833). I, II, III  
*E. marinella* Bradford, 1974. III  
*E. media* Giesbrecht, 1888. I, II, III, IV  
*E. paraconcinna* Fleminger, 1957. I  
*E. plana* Mori, 1937. III?  
*E. pseudotonsa* Fontaine, 1967. I  
*E. pubera* Sars, 1907. I  
*E. rimana* Bradford, 1974. IV  
*E. spinosa* Giesbrecht, 1892. I, II, IV  
*Paraeuchaeta aequatorialis* (Tanaka, 1958). III

*P. alaminae* (Park, 1975). I

*P. barbata* (Brady, 1883). I, II

*P. bisinuata* Sars, 1907 I, III

*P. calva* (Tanaka, 1958). I, II

*P. californica* (Esterly, 1906). III, IV

*P. confusa* (Tanaka, 1958). II

*P. copleyae* Park, 1994. III, IV

*P. cosmosa* (Tanaka, 1958). I, II

*P. gracilicauda* (Scott, 1909)

*P. gracilis* (Sars, 1905). I, II

*P. grandiremis* (Giesbrecht, 1888). III, IV

*P. hansenii* (With, 1915). I, II

*P. incisa* (Sars, 1905). I, II

*P. malayensis* Sewell, 1929. III

*P. mexicana* Park, 1994. IV

*P. sarsi* (Farran, 1908). I, II

*P. scopaeorhina* Park, 1994. III, IV

*P. scotti* (Farran, 1908). I, II

*P. sesquipedalis* Park, 1994. III, IV

*P. tonsa* (Giesbrecht, 1895). III

*P. triloba* Park, 1994. IV

*P. vorax* (Grice & Hulsemann, 1968). I, II

*Valdiviella brevicornis* Sars, 1905. II, III

*V. oligarthra* Steuer, 1904. I

**Family Heterorhabdidae** Sars, 1903

*Hemirhabdus latus* Sars, 1905. I

*Heterorhabdus clausi* (Giesbrecht, 1888). IV

*H. papilliger* (Claus, 1863). I, II, III, IV  
*H. spinifrons* (Claus, 1863). I, II  
*H. tanneri* (Giesbrecht, 1895). III  
*Heterostylites longicornis* (Giesbrecht, 1889). I, II, IV

**Family Lucicutiidae** Sars, 1903  
*Lucicutia atlantica* Wolfenden, 1904. I  
*L. clausi* (Giesbrecht, 1889). I, II  
*L. flavigaster* (Claus, 1863). I, II, III  
*L. formosa* Hulsemann, 1966. I  
*L. gaussae* Grice, 1963. I  
*L. gemina* (Farran, 1926). III  
*L. grandis* (Giesbrecht, 1895). III  
*L. magna* Wolfenden, 1904. I  
*L. maxima* Steuer, 1904. I  
*L. ovalis* (Giesbrecht, 1895). I  
*L. pacifica* Brodsky, 1950. III

**Family Megacalanidae** Wolfenden, 1904  
*Megacalanus princeps* Wolfenden, 1904. I, II

**Family Metridinidae** Sars, 1902  
*Gaussia princeps* (Scott, 1894). III  
*Metridia brevicauda* Giesbrecht, 1889. I, II, III  
*M. curticauda* Giesbrecht, 1889. III, IV  
*M. pacifica* Brodsky, 1950. III  
*M. princeps* Giesbrecht, 1889. I, III  
*Pleuromamma abdominalis* Lubbock, 1856. I, II, III, IV  
*P. borealis* (Dahl, 1893). III  
*P. gracilis* (Claus, 1863). I, II, III, IV  
*P. piseki* Farran, 1929. I, II  
*P. quadrungulata* (Dahl, 1893). III  
*P. xiphias* (Giesbrecht, 1889). I, II

**Family Paracalanidae** Giesbrecht, 1892  
*Acrocalanus andersoni* Bowman, 1958. I, IV  
*A. gracilis* Giesbrecht, 1888. IV  
*A. inermis* Sewell, 1912. III, IV  
*A. longicornis* Giesbrecht, 1888. I, II, III  
*A. monachus* Giesbrecht, 1888. III, IV  
*Paracalanus aculeatus* Giesbrecht, 1888. I, II, III, IV  
*P. denudatus* Sewell, 1929. I, IV  
*P. indicus* Wolfenden, 1904. II

*P. nanus* Sars, 1907. I  
*P. parvus* s.l. (Claus, 1863). III, IV  
*P. quasimodo* Bowman, 1971. I, II  
*Parvocalanus crassirostris* (Dahl, 1894). II

**Family Phaenidae** Sars, 1903  
*Cephalophanes tectus* (Esterly, 1911). I, II, III  
*Cornucalanus indicus* Sewell, 1929. I  
*Phaenna spinifera* Claus, 1863. I, II, III  
*Xanthocalanus agilis* Giesbrecht, 1892. I, II  
*X. paululus* Park, 1970. I, II

**Family Pontellidae** Dana, 1852  
*Anomalocera ornata* Sutcliffe, 1949. I  
*Calanopia americana* Dahl, 1894. I, II  
*Labidocera acuta* (Dana, 1849). III, IV  
*L. acutifrons* (Dana, 1852). I, II, III, IV  
*L. aestiva* Wheeler, 1901. I, II  
*L. detruncata* (Dana, 1849). III, IV  
*L. diandra* Fleminger, 1967. III, IV  
*L. eucheta* Giesbrecht, 1888. III  
*L. johnsoni* Fleminger, 1964. III, IV  
*L. jollae* Esterly, 1906. III, IV  
*L. kolpos* Fleminger, 1967. IV  
*L. lubbocki* Giesbrecht, 1889. IV  
*L. minuta* Giesbrecht, 1889. III, IV  
*L. mirabilis* Fleminger, 1957. I, II  
*L. nerii* (Krøyer, 1849). I, II, III  
*L. scotti* Giesbrecht, 1897. I, II  
*L. trispinosa* Esterly, 1905. III, IV  
*L. wilsoni* Fleminger & Engchow, 1966. II  
*Pontella agassizii* Giesbrecht, 1895. III, IV  
*P. armata* Dana, 1849. III  
*P. atlantica* (Milne-Edwards, 1840). I, II  
*P. fera* Dana, 1849. III  
*P. lobiancoi* (Canu, 1888). I  
*P. meadi* Wheeler, 1901. I, II  
*P. mimocerami* Fleminger, 1956. I, II  
*P. polydactyla* Fleminger, 1956. I  
*P. securifer* Brady, 1883. I, III  
*P. spinicauda* Mori, 1937. III  
*P. spinipes* Giesbrecht, 1889. III, IV  
*Pontellina plumata* (Dana, 1849). I, II, III, IV

*P. platychela* Fleminger & Hulsemann, 1974. I  
*P. sobrina* Fleminger & Hulsemann, 1974. III, IV  
*Pontellopsis* sp. Brady, 1883. IV  
*P. brevis* (Giesbrecht, 1889). I, II  
*P. lubbocki* Giesbrecht, 1889. III, IV  
*P. occidentalis* Esterly, 1906. III, IV  
*P. perspicax* Dana, 1852. I, II  
*P. regalis* Dana, 1852. I, III, IV  
*P. tenuicauda* Giesbrecht, 1892. III  
*P. villosa* Brady, 1883. III  
*P. yamadae* Mori, 1937. III

**Family Pseudocalanidae** Boeck, 1872  
*Pseudocalanus elongatus* (Boeck, 1865). IV

**Family Pseudodiaptomidae** Herrick, 1884  
*Pseudodiaptomus acutus* (Dahl, 1894). II  
*P. cokeri* González & Bowman, 1965. II  
*P. culebreensis* Marsh, 1913. III, IV  
*P. euryhalinus* Johnson, 1939. III, IV  
*P. marshi* Wright, 1936. II  
*P. pelagicus* Herrick, 1884. I  
*P. wrightii* Johnson, 1964. IV

**Family Scolecithricidae** Giesbrecht, 1892  
*Amallothrix gracilis* Sars, 1905. I  
*Lophothrix frontalis* Giesbrecht, 1895. I, II  
*L. latipes* Scott, 1894. I, II  
*Scaphocalanus curtus* (Farran, 1926). IV  
*S. echinatus* (Farran, 1905). I, IV  
*S. magnus* (Scott, 1909). III  
*Scolecithrix bradyi* Giesbrecht, 1888. I, II, III, IV  
*S. danae* (Lubbock, 1856). I, II, III, IV  
*S. elephas* Esterly, 1913. III  
*S. longirostris* Esterly, 1913. III  
*S. mollis* Esterly, 1913. III  
*S. obscura* Esterly, 1913. III  
*S. pacifica* Esterly, 1905. III  
*Scolecithricella abyssalis* (Giesbrecht, 1892). III, IV  
*S. ctenopus* (Giesbrecht, 1888). III, IV  
*S. dentata* (Giesbrecht, 1892). I, II  
*S. emarginata* (Farran, 1905). IV  
*S. lobophora* Park, 1970. I  
*S. marginata* (Giesbrecht, 1888). III  
*S. nicobarica* Sewell, 1929. III, IV  
*S. pseudoarcuata* Park, 1970. I

*S. tenuiserrata* Giesbrecht, 1892. I, III  
*S. vittata* (Giesbrecht, 1892). I  
*Scotocalanus australis* Farran, 1936. I  
*S. backusi* Grice, 1969. I  
*S. corystes* Owre & Foyo, 1967. I, II  
*S. helenae* Lubbock, 1856. I, II  
*S. persecans* Giesbrecht, 1895. I, II  
*S. securifrons* (Scott, 1912). I, II  
*S. thomasi* Scott, 1909. I, II

**Family Spinocalanidae** Vervoort, 1951  
*Isaacscalanus paucisetosus* Fleminger, 1983. IV  
*Mimocalanus crassus* Park, 1970. I  
*M. heronae* Damkaer, 1975. III?  
*Spinocalanus abyssalis* (Giesbrecht, 1888). III

**Family Stephidae** Sars, 1902  
*Stephos deichmannae* Fleminger, 1956. I

**Family Temoridae** Giesbrecht, 1892  
*Eurytemora affinis* (Poppe, 1880). I, III, IV  
*E. hirundoides* (Nordquist, 1888). I, IV  
*Temora discaudata* Giesbrecht, 1889. III, IV  
*T. stylifera* (Dana, 1852). I, II  
*T. turbinata* (Dana, 1852). I, II, III, IV  
*Temoropia mayumbaensis* Scott, 1894. I, II, IV

**Family Tharybidae** Sars, 1902  
*Parundinella manicula* Fleminger, 1956. I  
*P. spinodenticulata* Fleminger, 1956. I

**Family Tortanidae** Sars, 1902  
*Tortanus angularis* Ohtsuka, 1992. II  
*T. setacaudatus* Williams, 1906. I

**Superorder Podoplea**

**Order Cyclopoida** Burmeister, 1843

**Family Oithonidae** Dana, 1853  
*Oithona alvarezi* Lindberg, 1955. III  
*O. atlantica* Farran, 1908. I, II  
*O. attenuata* Farran, 1913. III  
*O. brevicornis* Giesbrecht, 1891. I  
*O. decipiens* Farran, 1913. III  
*O. fallax* Farran, 1913. III  
*O. fonsecae* Ferrari & Bowman, 1980. I  
*O. hebes* Giesbrecht, 1891. I  
*O. nana* Giesbrecht, 1892. I, II, III, IV

*O. oculata* Farran, 1913. I, II  
*O. oswaldoocruzi* Oliveira, 1945. I, II  
*O. plumifera* Baird, 1843. I, II, III, IV  
*O. rigida* Giesbrecht, 1896. III  
*O. robusta* Giesbrecht, 1891. I, II, III, IV  
*O. setigera* (Dana, 1849). I, II, III, IV  
*O. similis* Claus, 1866. III  
*O. simplex* Farran, 1913. I, II  
*O. tenuis* Rosendorn, 1917. III  
*Paroithona parvula* Farran, 1908. III

**Family Thaumatoxylidae** Sars, 1913  
*Caribeopsyllus chawayi* Suárez-Morales, 1998. II

**Order Monstrilloidea** Sars, 1901

**Family Monstrillidae** Dana, 1849  
*Cymbasoma bowmani* Suárez-Morales & Gasca, 1997. II  
*C. boxshalli* (Suárez-Morales, 1993c). II  
*C. quintanarroensis* (Suárez-Morales, 1994). II  
*C. chelemense* Suárez-Morales & Escamilla, 1997. I  
*Monstrilla barbata* Suárez-Morales & Gasca, 1992. II  
*M. bitumida* Suárez-Morales & Palomares-García, 1995. IV  
*M. elongata* Suárez-Morales, 1994. II  
*M. mariaeugeniae* Suárez-Morales & Islas-Landeros, 1993. II  
*M. reidae* Suárez-Morales, 1993a. II  
*M. rebis* Suárez-Morales, 1993b. II  
*M. spinosa* Park, 1967. III  
*Monstrillopsis ciroi* Suárez-Morales, 1993b. II

**Order Poecilostomatoida**

**Family Clausidiidae** Embleton, 1901  
*Hyphalion captans* Humes, 1987. IV  
*Sapphirella tropica* Wolfenden, 1906. II, III

**Family Corycaeidae** Dana, 1849

*Corycaeus affinis* McMurrich, 1916. III  
*C. amazonicus* Dahl, 1894. II  
*C. anglicus* Lubbock, 1857. IV  
*C. brehmi* Steuer, 1910. III, IV  
*C. catus* Dahl, 1894. I, II  
*C. clausi* Dahl, 1894. I, IV  
*C. crassiusculus* Dana, 1849. III, IV

*C. dubius* Farran, 1911. III, IV  
*C. flaccus* Giesbrecht, 1891. I, II, III, IV  
*C. furcifer* Claus, 1863. I, II  
*C. japonicus* Mori, 1937. III, IV  
*C. latus* Dana, 1849. I, II, III, IV  
*C. laetus* Dana, 1849. I, II, III, IV  
*C. limbatus* Brady, 1883. I, II  
*C. longistylis* Dana, 1849. III  
*C. obtusus* Dana, 1849. IV  
*C. ovalis* Claus, 1863. IV  
*C. pacificus* Dahl, 1894. III  
*C. robustus* Giesbrecht, 1891. III  
*C. speciosus* Dana, 1849. I, II, III, IV  
*C. subulatus* Herrick, 1887. II  
*C. trukicus* Mori, 1937. IV  
*C. typicus* (Krøyer, 1849). I, II  
*Farranula carinata* (Giesbrecht, 1891). I, II  
*F. gibbula* (Giesbrecht, 1891). III  
*F. gracilis* (Dana, 1849). I, II  
*F. rostrata* (Claus, 1863). I, II, IV

**Family Erebonasteridae** Humes, 1987  
*Erebonaster protentipes* Humes, 1987. IV  
*Laitmatobius crinitus* Humes, 1987. IV

**Family Lichomolgidae** Kossman, 1877  
*Macrochiron sargassi* Sars, 1916. II

**Family Oncaeidae** Giesbrecht, 1892  
*Lubbockia aculeata* Giesbrecht, 1891. I, III  
*L. squillimana* Claus, 1863. I, II, III  
*Oncea conifera* Giesbrecht, 1891. I, II, IV  
*O. media* Giesbrecht, 1891. I, II, IV  
*O. media* f. *major* Sewell, 1947. I  
*O. mediterranea* (Claus, 1863). I, II,  
*O. minuta* Giesbrecht, 1892. IV  
*O. ornata* Giesbrecht, 1891. I, II  
*O. notopus* Giesbrecht, 1891. I, II  
*O. praeclarata* Humes, 1988. IV  
*O. venusta* Philippi, 1843. I, II, IV  
*Pachos punctatum* (Claus, 1863). I, II, III  
*P. dentatum* (Mori, 1932). III

**Family Sapphirinidae** Thorell, 1859  
*Copilia mirabilis* Dana, 1849. I, II, III, IV  
*C. quadrata* Dana, 1849. I, II, III, IV  
*C. vitrea* (Haeckel, 1864). I, II, III

*C. longistylis* Mori, 1932. III  
*Sapphirina angusta* Dana, 1849. I, II, III  
*S. bicuspidata* Giesbrecht, 1891. I  
*S. auronitens* Claus, 1863. I, II  
*S. darwini* Haeckel, 1864. III  
*S. gastrica* Giesbrecht, 1891. III  
*S. gemma* Dana, 1849. IV, I, II  
*S. intestinata* Giesbrecht, 1891. I  
*S. metallina* Dana, 1849. I, II, III  
*S. nigromaculata* Claus, 1863. I, II, III, IV  
*S. opalina* Dana, 1849. I, II, III, IV  
*S. ovatolanceolata* Dana, 1849. I, II  
*S. scarlata* Giesbrecht, 1891. I  
*S. stellata* Giesbrecht, 1891. I, II

**Order Harpacticoida** Sars, 1903 b  
**Family Aegisthidae** Giesbrecht, 1892  
*Aegisthus mucronatus* Giesbrecht, 1891. I

**Family Ameiridae** Monard, 1927  
*Nitokra laingensis* Fiers, 1986. I

**Family Canthocamptidae** Sars, 1911  
*Mesochra pacifica* Gómez-Noguera & Fiers, 1997. III  
*M. pseudoparva* Gómez-Noguera & Fiers, 1997. III

**Family Canuellidae** Lang, 1944  
*Ellucana secunda* Coull, 1971. II

**Family Cletodidae** Sars, 1911  
*Actinocletodes woutersi* Fiers, 1986. I  
*Enhydrosoma lacunae* Jakubisiak, 1932. I  
*Triathrix goldi* Fiers, 1997. I  
*Schizothrix* sp. Fiers, 1997. I

**Family Clytemnestridae** Scott, 1909  
*Clytemnestra scutellata* Dana, 1848. I, II, III  
*C. rostrata* (Brady, 1883). I, III

**Family Ectinosomatidae** Olofsson, 1917  
*Microsetella rosea* (Dana, 1848). I, II, III, IV  
*M. norvegica* (Boeck, 1846). III, IV

**Family Laophontidae** Scott, 1912  
*Folioquinpes chathamensis* (Sars, 1905). I

*Laophonte cornuta* Philippi, 1840. II  
*Loureirophonte majahualensis* Fiers, 1993. II  
*Mexicolaophonte arganoi* Cottarelli, 1977. II  
*Onychocamptus mohammed* (Blanchard & Richardson, 1891). I  
*Paralaophontodes echinatus* (Willey, 1931). I

**Family Longipediidae** Sars, 1911  
*Longipedia americana* Wells, 1980. I

**Family Louriniidae** Sars, 1911  
*Lourinia armata* (Claus, 1866). II

**Family Metidae** Philippi, 1843  
*Metis holothuriae* (Edwards, 1891). II

**Family Miraciidae** Dana, 1846  
*Macrosetella gracilis* (Dana, 1848). I, II, III, IV  
*Miracia efferata* Dana, 1852. I, II  
*M. minor* Scott, 1893. I  
*Oculosetella gracilis* Dana, 1852. I

**Family Tachidiidae** Sars, 1909  
*Euterpina acutifrons* Dana, 1852. I, II, III, IV  
*Microarthridion vazquezi* Gómez-Noguera & Fiers, 1997. III

**Family Tegastidae** Norman, 1911  
*Tegastes intermedius* (Herrick, 1887). I

**Family Tetragonicipitidae** Lang, 1944  
*Diagoniceps mexicana* Fiers, 1995. I  
*Godianiceps maya* Fiers, 1995. II  
*Odaginiceps clarkae* Fiers, 1995. II  
*O. xamaneki* Fiers, 1995. I  
*Oniscopsis robinsoni* Chappuis & Delamare, 1956. I  
*Phyllopodopsyllus yucatanensis* Fiers, 1995. I

**Family Thalestridae** Sars, 1905  
*Rhynchothalestris rufocincta* (Brady, 1880). II

**Order Siphonostomatoida** Thorell, 1859  
**Family Dirivultidae** Humes & Dojiri, 1980  
*Aphotopontius arcuatus* Humes, 1987. III  
*A. baculigerus* Humes, 1987. III

<i>A. flexispina</i> Humes, 1987. III	<i>S. hispidulus</i> Humes, 1987. III
<i>A. limatulus</i> Humes, 1987. III	<i>S. lumiger</i> Humes, 1989. III
<i>A. mammillatus</i> Humes, 1987. III, IV	<i>S. mucroniferus</i> Humes, 1987. IV
<i>Ceuthocetes aliger</i> Humes & Dojiri, 1980. III	<i>S. paxillifer</i> Humes, 1989. III
<i>C. acanthothrix</i> Humes, 1987. III	<i>S. sentifer</i> Humes, 1987. III
<i>C. cristatus</i> Humes, 1987. III	<i>S. verruculatus</i> Humes, 1987. III
<i>C. introversus</i> Humes, 1987. III	
<i>Ecbathyron prolixicauda</i> Humes, 1987. III	<b>Family Pontoeciellidae</b> Giesbrecht, 1895
<i>Exima singula</i> Humes, 1987. III	<i>Pontoecilla abyssicola</i> Giesbrecht, 1895. I
<i>Nilva torifera</i> Humes, 1987. III	
<i>Rhogobius contractus</i> Humes, 1987. III	<b>Family Ratanidae</b> Giesbrecht, 1897
<i>Stygiopontius appositus</i> Humes, 1989. III	<i>Ratania flava</i> Giesbrecht, 1891. I
<i>S. cinctiger</i> Humes, 1987. III	
<i>S. flexus</i> Humes, 1987. IV	479 species

## REFERENCES

ALAMEDA DE LA MORA, G. 1980. *Sistemática y distribución de los copépodos (Crustacea) del Golfo de Tehuantepec (Méjico)*. Tesis Facultad de Ciencias, UNAM, México, D.F. 121 p.126.

AGUAYO-SAVIÑÓN, M.A. 1965. *Contribución al conocimiento de los copépodos de la zona arrecifal de Veracruz, Ver. (sistemática y distribución)*. Tesis Facultad de Ciencias, Universidad Nacional Autónoma de México, México, D.F. 76 p.

ÁLVAREZ-CADENA, J.N. 1985. Composición y abundancia de los copépodos planctónicos de la Bahía de Mazatlán, Sin. México. *An.Inst. Cienc. del Mar y Limnol., Univ. Nal. Autón. México* 12(1):1-14.

ÁLVAREZ-CADENA, J.N. & R. CORTÉS-ALTAMIRANO. 1990. Algunos factores físicos y biológicos que afectan las poblaciones naturales de *Acartia tonsa* y *A. lilljeborgii* (Copepoda:Acartiidae) en el Estero de Urías, Sinaloa, México. *Inv.Mar.CICIMAR* 5(1):69-77.

ÁLVAREZ-SILVA, C. & S. GÓMEZ-AGUIRRE. 1994. *Labidocera aestiva* and *L. scotti* in Tamiahua lagoon, Veracruz, Mexico. *Hydrobiologia* 292/293:265-269.

BJÖRNBERG, T.K. 1971. Distribution of plankton relative to the general circulation system in the area of the Caribbean Sea and adjacent regions. In: UNESCO (ed.) *Symposium on Investigations and Resources of the Caribbean Sea and Adjacent Regions*. UNESCO, Paris, pp. 343-356.

BOWMAN, T.E. & N.W. JOHNSON. 1973. Distributional atlas of Calanoida in the California Current region. *CalCOFI Atlas* 19.

BRINTON, E., A. FLEMINGER & D. SIEGEL-CAUSEY. 1986. The temperate and tropical planktonic biotas of the Gulf of California. *CalCOFI Rep.* 27:228-266.

CAMPOS, A. 1980. Distribución y abundancia relativa de los copépodos planctónicos en el Golfo de México y el Mar Caribe. *Cienc. Biol.* 5:57-74.

CAMPOS, A. 1982. Lista de especies de copépodos planctónicos de aguas cubanas. *Poeyana* (24):1-27.

CAMPOS, A. & E. SUÁREZ. 1994. *Copépodos pelágicos del Golfo de México y Mar Caribe. I. Sistemática y biología*. CIQRO/CONACYT, México. 374 p.

CERVANTES-DUARTE, R. & S. HERNÁNDEZ-TRUJILLO. 1989. Características hidrográficas de la

parte sur de la corriente de California y su relación con algunas especies de copépodos en 1983. *Inv. Mar. CICIMAR* 4(2):211-224.

DE LA CRUZ, A. 1971. Estudios de plancton en el banco de Campeche. In: UNESCO (ed.). *Coloquio sobre investigaciones y recursos del Mar Caribe y regiones adyacentes*. UNESCO, París, pp. 375-383.

DE LA CRUZ, A. 1972. Zooplankton de la región sureste del Golfo de México. *Ciencias (Cuba), Serie 4*(24):1-55.

ESTERLY, C.O. 1911. Third report on the Copepoda of the San Diego region. *Univ. Calif. Publ. Zool.* 6(14):313-352.

ESTERLY, C.O. 1912. The occurrence and vertical distribution of the Copepoda of the San Diego region with particular reference to nineteen species. *Univ. Calif. Publ. Zool.* 9(6):253-340.

ESTERLY, C.O. 1913. Fourth taxonomic report on the Copepoda of the San Diego region. *Univ. Calif. Publ. Zool.* 11(10):181-196.

FERRARI, F.D., 1975. Taxonomic notes of the genus *Oncaeaa* (Copepoda: Cyclopoida) from the Gulf of Mexico and Northern Caribbean Sea. *Proc. Biol. Soc. Wash.* 88(21):217-232.

FERRARI, F.D. & T.E. BOWMAN. 1980. Pelagic copepods of the family Oithonidae (Cyclopoida) from the East coasts of Central and South America. *Smithson. Contr. Zool.* 312:1-27.

FIERS, F. 1995. New Tetragonicicipitidae (Copepoda, Harpacticoida) from the Yucatecan continental shelf (Mexico), including a revision of the genus *Diagoniceps* Willey. *Bull. Inst. Royal Sci. Nat. Belg.* 65:151-236.

FLEMINGER, A. 1956. *Taxonomic and distributional studies on the epiplanktonic calanoid copepods (Crustacea) of the Gulf of Mexico*. Ph. D. Dissertation, Harvard University Library, Cambridge, Massachusetts. 317 p.+ 25 p.

FLEMINGER, A. 1957a. New calanoid copepods of *Pontella* Dana and *Labidocera* Lubbock with notes on the distribution of the genera in the Gulf of Mexico. *Tul. Stud. Zool.* 5(2):19-34.

FLEMINGER, A. 1957b. New genus and two new species of Tharybidae (Copepoda Calanoida) from the Gulf of Mexico with remarks on the status of the family. *Fish. Bull. U.S.* 116:347-354.

FLEMINGER, A. 1957c. New calanoid copepods of the families Aetideidae, Euchaetidae, and Stephidae from the Gulf of Mexico. *Fish. Bull. U.S.* 117:355-363.

FLEMINGER, A. 1983. Description and phylogeny of *Isaacscalanus paucisetos* n. gen., n. sp., (Copepoda: Calanoida) from East Pacific hydrothermal vent site (21° N). *Proc. Biol. Soc. Wash.* 96(4):605-662.

FLEMINGER, A. & K. HULSEMANN. 1977. Geographical range and taxonomic divergence in North Atlantic *Calanus* (*C. helgolandicus*, *C. finmarchicus* and *C. glacialis*). *Mar. Biol.* 40: 233-248.

FLEMINGER, A. & T.E. BOWMAN. 1956. A new species of *Candacia* (Copepoda: Calanoida) from the western North Atlantic Ocean. *Proc. U.S. Nat. Mus.* 106(3370):331-377.

GRICE, G.D. 1960. Copepods of the genus *Oithona* from the Gulf of Mexico. *Bull. Mar. Sci. Gulf & Carib.* 10(4): 485-490.

GRICE, G.D. 1961. Calanoid copepods from equatorial waters of the Pacific Ocean. *Fish. Bull. U.S.* 61: 171-246.

GRICE, G.D. 1969. Calanoid copepods from the Caribbean Sea and Gulf of Mexico. I. New species and new records from midwater trawl samples. *Bull. Mar. Sci.*, 19(2): 446-455.

HENDERSON, J.C., 1958. *Preliminary study of distribution of some copepods in upper Laguna Madre.* Master's Thesis, A & M College of Texas, University of Texas, Austin. 41 p.

HERNÁNDEZ-TRUJILLO, S. 1984. *Contribución al conocimiento de la distribución y abundancia de copépodos frente a Bahía Magdalena, Baja California Sur en el verano y otoño de 1982.* Tesis Especial Nacional de Estudios Profesionales Iztacala, UNAM, México, D. F. 74 p.

HERNÁNDEZ-TRUJILLO, S. 1989a. Los copépodos del Pacífico sudcaliforniano en enero de 1984. *Inv. Mar. CICIMAR* 4(2):233-240.

HERNÁNDEZ-TRUJILLO, S. 1989b. *Variación de la distribución de los copépodos en el Pacífico de Baja California Sur.* Tesis Maestría CICIMAR-Instituto Politécnico Nacional, México, D. F. 80 p.

HERNÁNDEZ-TRUJILLO, S. 1991a. Variación latitudinal de la diversidad de copépodos en la costa occidental de B.C.S. (1982-1984). *Ciencias Marinas.* 17(4):83-103.

HERNÁNDEZ-TRUJILLO, S. 1991b. Análisis de la diversidad de copépodos en el Pacífico de B.C.S. (mayo, 1986). *An. Inst. Cienc. Mar y Limnol., Univ. Nal. Autón.* México 18(2):279-288.

HERNÁNDEZ-TRUJILLO, S. 1991c. Copépodos pontélicos en Bahía Magdalena, Baja California Sur (junio, julio de 1988). *Inv. Mar. CICIMAR* 6(1):155-164.

HERNÁNDEZ-TRUJILLO, S. 1996. Marine copepod diversity of Mexico: an assessment. *VI International Conference on Copepoda.* Hamburg, August 1996 (abstract) pp.61.

HERON, G.A. 1964. Seven species of *Eurytemora* (Copepoda) from northwestern North America. *Crustaceana* 7:199-211.

HERRICK, C.L. 1887. Contribution to the fauna of the Gulf of Mexico and the South. List of the freshwater and marine Crustacea of Alabama, with descriptions of the new species and synoptical keys for identification. *Mem. Denison Sci. Assoc.* 1(1):1-56.

HOPKINS, T.L. 1982. The vertical distribution of zooplankton in the Eastern Gulf of Mexico. *Deep-Sea. Res.* 29(9):1069-1083.

HUMES, A.G. 1988a. *Oncaeae praeclaran* sp. (Copepoda, Poecilostomatoid) from deep-sea hydrothermal vents in the eastern Pacific. *J. Plankton Res.* 10(3):475-485.

HUMES, A.G. 1988b. Copepoda from deep-sea hydrothermal vents and cold seeps. *Hydrobiologia.* 167/168:554-594.

HUMES, A.G. 1990. *Aphotopontius probulus* sp. nov., and records of other siphonostomatoid copepods from deep-sea vents in the eastern Pacific. *Scient. Mar.* 54(2):145-154.

HUMES, A.G. 1991. Zoogeography of copepods at hydrothermal vents in the Eastern Pacific Ocean. *Bull. Plankton Soc. Japan, Spec. Vol.(1991):383-389.*

HUYLS, R. & G. Boxshall. 1991. *Copepod evolution.* The Ray Society, London. 468 p.

JEFFRIES, H.P. 1962. Succession of two *Acartia* species in estuaries. *Limnol. Oceanogr.* 7:354-364.

JIMÉNEZ-PÉREZ, L.C. 1989. Análisis de la taxocenosis de los copépodos pelágicos en la zona frente a Playa San Ramón, Baja California, México. *Inv. Mar. CICIMAR* 4(2):165-174.

JROMOV, N.S., 1965. *Sobre la distribución cuantitativa del plancton en la parte noroccidental del Mar Caribe y el Golfo de México.* Trabajos del VNIRO 57, Moscú. pp. 381-391, 4 figs. (en ruso).

JROMOV, N.S. 1967. Investigaciones de plancton en el Golfo de México y Mar Caribe. *Invest. Pesq. Cubano-Soviéticas II.* VNIRO y CIP, Moscú 39-57 (en ruso).

JROMOV, N.S. & O. GONZÁLEZ C., 1967. Distribución del plancton en el Golfo de México y algunos rasgos de su dinámica estacional. *Invest. Pesq. Cubano-Soviéticas.* VNIRO y CIP, Moscú, pp. 47-69, 11 figs. (en ruso).

LÓPEZ-SALGADO, I. & E. SUÁREZ. 1996. Ampliación de ámbito de *Ratania flava* (Copepoda: Siphonostomatoida) en el Atlántico Noroccidental. *Rev. Biol. Trop.* 44:944-945.

MARIKOVA, V.K. & A. CAMPOS., 1967. Características cuantitativas y cualitativas del zoopláncton de la plataforma cubana. *Estudios Inst. Oceanología*. (Academia de Ciencias, Cuba) 2(2):63-80.

MARKHASEVA, E.L. 1996. *Calanoid copepods of the family Aetideidae of the world ocean*. Russian Academy of Sciences, Zoological Institute. St. Petersburg. 331 p.

MICHEL, H.B. & M. FOYO. 1976. *Caribbean zooplankton. Part I. Siphonophora, Heteropoda, Copepoda, Euphausiacea, Chaetognatha and Salpidae*. Office of Naval Research, Dept. of the Navy, U.S.A. 549 p.

NISHIDA, S. 1985. Taxonomy and distribution of the family Oithonidae (Copepoda, Cyclopoida) in the Pacific and Indian Oceans. *Bull. Ocean Res. Inst. Univ. Tokyo* 20:1-163.

ORTNER, P.B., L.C. HILL & S.R. CUMMINGS, 1989. Zooplankton community structure and copepod species composition in the northern Gulf of Mexico. *Cont. Shelf Res.* 9(4):387-402.

OWRE, H.B. & M. FOYO, 1964a. Report on a collection of Copepoda from the Caribbean Sea. *Bull. Mar. Sci. Gulf & Carib.* 14(2):359-372.

OWRE, H.B. & M. FOYO, 1964b. Plankton of the Florida Current. Part IX. Additions of the list of Copepoda, with descriptions of two rare species. *Bull. Mar. Sci. Gulf & Carib.* 14(2):342-358.

OWRE, H.B. & M. FOYO, 1967. *Copepods of the Florida Current. Fauna Caribaea No. I: Crustacea, I: Copepoda*. Inst. of Mar. Sci., University of Miami Florida. 137 p.

PALOMARES-GARCÍA, J.R. 1987. *Abundancia, distribución y variación estacional de los copépodos (Crustacea) de la ensenada de La Paz, Baja California Sur*. Tesis Facultad de Ciencias, UNAM, México, D.F. 162 p.

PALOMARES-GARCÍA, J.R. 1991. Ampliación de la distribución de *Pseudodiaptomus culebreensis* (Calanoida:Copepoda) en el Golfo de California, México. *Rev. Biol. Trop.* 39(1):181.

PALOMARES-GARCÍA, J.R. 1992. Análisis de la taxocenosis de los copépodos en el complejo lagunar de Bahía Magdalena-Almejas, B.C.S., durante 1985-86. *Ciencias Marinas*, 18:71-92.

PARK, T. S., 1970. Calanoid copepods from the Caribbean Sea and Gulf of Mexico. 2. Two new species and new records from plankton samples. *Bull. Mar. Sci.* 20(2):472-546.

PARK, T. S. 1975a. Calanoid copepods of the family Euchaetidae from the Gulf of Mexico and western Caribbean Sea. *Smithson. Contr. Zool.* 196:37-48.

PARK, T. S. 1975b. Calanoid copepods of the genera *Gaetanus* and *Gaidius* from the Gulf of Mexico. *Bull. Mar. Sci.* 25(1):9-34.

PARK, T. S. 1975c. Calanoid copepods of the genera *Aetidopsis*, *Pseudaetideus* and *Chiridius* from the Gulf of Mexico. *Bull. Mar. Sci.* 25(2):272-290.

PARK, T. S. 1976. Calanoid copepods of the genus *Euchirella* from the Gulf of Mexico. *Contr. Mar. Sci.* 20:101-122.

PARK, T. S. 1978. Calanoid copepods (Aetideidae and Euchaetidae) from Antarctic and sub-Antarctic waters. *Antarct. Res. Ser.* 27:91-290.

POLANCO, J.E. 1968. *Contribución al conocimiento de la sistemática y distribución de las familias Corycaeidae y Sapphirinidae (Crustacea: Copepoda) en la zona arrecifal de Veracruz, Ver.* Tesis Facultad de Ciencias, Universidad Nacional Autónoma de México, México, D.F. 109 p.

RAZOUIS, C. 1996. Diversité et répartition géographique chez les copépodes pélagiques. 2. Platycopioida, Misophrioida, Mormonilloida, Cyclopoida, Poecilostomatoida, Harpac-ticoida, Monstrilloida. *Ann. Inst. Oceanogr.* 72:5-149.

REID, J.W. 1990. Continental and coastal free-living Copepoda (Crustacea) of Mexico, Central America and the Caribbean region. In: D. Navarro & J.G. Robinson (eds.). *Diversidad biológica en la Reserva de la Biosfera de Sian Ka'an, Quintana Roo, México.* CIQRO/ University of Florida, Chetumal, Q. Roo, pp. 175-213.

SALAS-MARMOLEJO, J. 1981. *Distribución y abundancia de los copépodos (Copepoda) en la Laguna de Términos, México, durante un ciclo anual (1978).* Tesis Facultad de Ciencias, Universidad Nacional Autónoma de México, México, D. F. 88 pp.

SUÁREZ, E., 1990a. Copépodos planctónicos de la Bahía de la Ascensión, Reserva de la Biosfera de Sian Ka'an, Q.Roo, México. In: D. Navarro, & J. Robinson (eds.). *Diversidad biológica en la Reserva de la Biosfera de Sian Ka'an, Quintana Roo, México.* CIQRO/ PSTM, University of Florida, Chetumal, Q. Roo, pp. 215-238.

SUÁREZ, E. 1991a. New report of *Euaugaptilus filigerus* (Claus, 1863) (Copepoda: Calanoida). *Inu. Mar. (CICIMAR)* 6(1):127-130.

SUÁREZ, E. 1991b. Primer registro de *Arietellus giesbrechti* Sars (Copepoda: Calanoida) en el Canal de Yucatán y su relación con una surgencia local. *Univ. y Ciencia* 8(15): 31-36.

SUÁREZ, E. 1992a. Lista faunística de los copépodos calanoides (Copepoda: Calanoida) del Golfo de México: consideraciones zoogeográficas. *Ciencias Marinas* 18(1): 119-151.

SUÁREZ, E. 1992b. Copépodos planctónicos (Crustacea: Copepoda) del estrato 0-50 m en la zona Sur del Golfo de México. *Carib. J. Sci.* 28(3-4):47-59.

SUÁREZ, E. 1993a. A new species of *Thaumaleus* (Copepoda: Monstrilloida) from the eastern coast of the Yucatan Peninsula. *Crustaceana* 64(1):85-89.

SUÁREZ, E. 1993b. *Monstrilla reidae*, a new species of monstrilloid copepod from the Caribbean Sea off Mexico. *Bull. Mar. Sci.* 52 (2):717-720.

SUÁREZ, E. 1993c. Two new monstrilloids (Copepoda: Monstrilloida) from the coastal area of the Mexican Caribbean Sea. *J. Crust. Biol.* 13(2):349-356.

SUÁREZ, E. 1994a. Copépodos pláncticos de la Bahía de Chetumal, México (1990-1991). *Carib.J.Sci.* 30(3-4):181-188.

SUÁREZ, E. 1994b. Lista faunística comentada de los copépodos monstriloides (Crustacea, Copepoda) de la Bahía de la Ascensión, Q. Roo. *Sian Ka'an, Ser. Documentos.* 2:11-17.

SUÁREZ, E. 1996. On a tropical subspecies of *Monstrilla wandelli* (Copepoda: Monstrilloida) from the Mexican coasts of the Caribbean Sea. *Crustaceana* 69 (1): 34-40.

SUÁREZ, E. & R. GASCA. 1989a. Copépodos calanoides epiplanctónicos del Domo de Costa Rica (julio-agosto, 1982). *Ciencias Marinas* 15 (1): 89-102.

SUÁREZ, E. & R. GASCA. 1989b. Copépodos epiplanctónicos (Crustacea) del Canal de Yucatán (mayo-junio, 1984). *Car. J. Sci.* 25(3-4):196-202.

SUÁREZ, E. & R. GASCA. 1991. Calanoid copepods of the Southern Gulf of Mexico (spring, 1986). *Bull. Plankton Soc. Japan. Spec. Vol.* (1991): 593-596.

SUÁREZ, E. & R. GASCA. 1992. A new species of *Monstrilla* from the coastal zone of the Mexican Caribbean Sea. *Crustaceana* 63(3):301-305.

SUÁREZ, E. & R. GASCA. 1996. Planktonic copepods of Bahía de la Ascensión, Caribbean coast of Mexico: a seasonal survey. *Crustaceana* 69(2):162-174.

SUÁREZ, E. & J.W. REID. 1991. Ampliación del ámbito de *Macrochiron sargassi* G.O. Sars (Copepoda: Lichomolgidae) en el Atlántico Noroccidental. *Rev. Biol. Trop.* 39(2):321-322.

SUÁREZ, E. & R. VÁSQUEZ-YEOMANS. 1996. On *Monstrilla spinosa* Park, 1967 (Copepoda: Monstrilloida) in The western Pacific. *Crustaceana* 69(3): 288-294.

SUÁREZ, E. & J.C. ZURITA. 1991. Copépodos epipelágicos de la zona costera central de Michoacán, México (invierno-verano, 1983). *Univ. y Ciencia* 8(16):25-32.

SUÁREZ, E., R. GASCA & E. SOSA. 1990. Calanoid copepods (Copepoda: Calanoida) from the Mexican Western Gulf of Mexico. *Car. J. Sci.* 26(3-4):122-124.

TRUJILLO, A. 1986. Life cycle of the marine calanoid copepod *Acartia californiensis* Trinast reared under laboratory conditions. *CalCOFI Rep.* 27:188-204.

TURCOTT-DOLORES, V. 1976. Plancton de lagunas costeras. XIV. Variación estacional de los copépodos en la Laguna de Yávaros, Son., México (1969-1970). *Rev. Lat.Amer. Microbiol.* 18:159-165.

TURNER, J.T., S. COLLARD, J.C. WRIGHT, D. MITCHELL & P. STEELE. 1979. Summer distribution of pontellid copepods in the neuston of the eastern Gulf of Mexico continental shelf. *Bull. Mar. Sci.* 29(3):287-297.

TURNER, J.T. & S.B. COLLARD. 1980. Winter distribution of pontellid copepods in the neuston of the Eastern Gulf of Mexico continental shelf. *Bull. Mar. Sci.* 30(2):526-529.

WALTER, T.C., 1989. Review of the new world species of *Pseudodiaptomus* (Copepoda: Calanoida) with a key to the species. *Bull. Mar. Sci.* 45(3):590-628.

ZAMORA-SÁNCHEZ, M.E. 1974. *Estudio de las especies del género Acartia (Copepoda:Acartiidae) de la zona estuarina de Agiabampo, Sonora: taxonomía, distribución y notas ecológicas*. Tesis Facultad de Ciencias, Universidad Nacional Autónoma de México, México, D.F..

ZAMORA-SÁNCHEZ, M.E. & S. GÓMEZ-AGUILARRE. 1985. Una especie nueva del subgénero *Acanthacartia* Steuer 1915 (Copepoda: Acartiidae) de la laguna costera de Agiabampo, Sonora, México. *Anales Inst. Biol. Univ. Nac. Autón. México, Ser Zool.* 56(2):337-346.